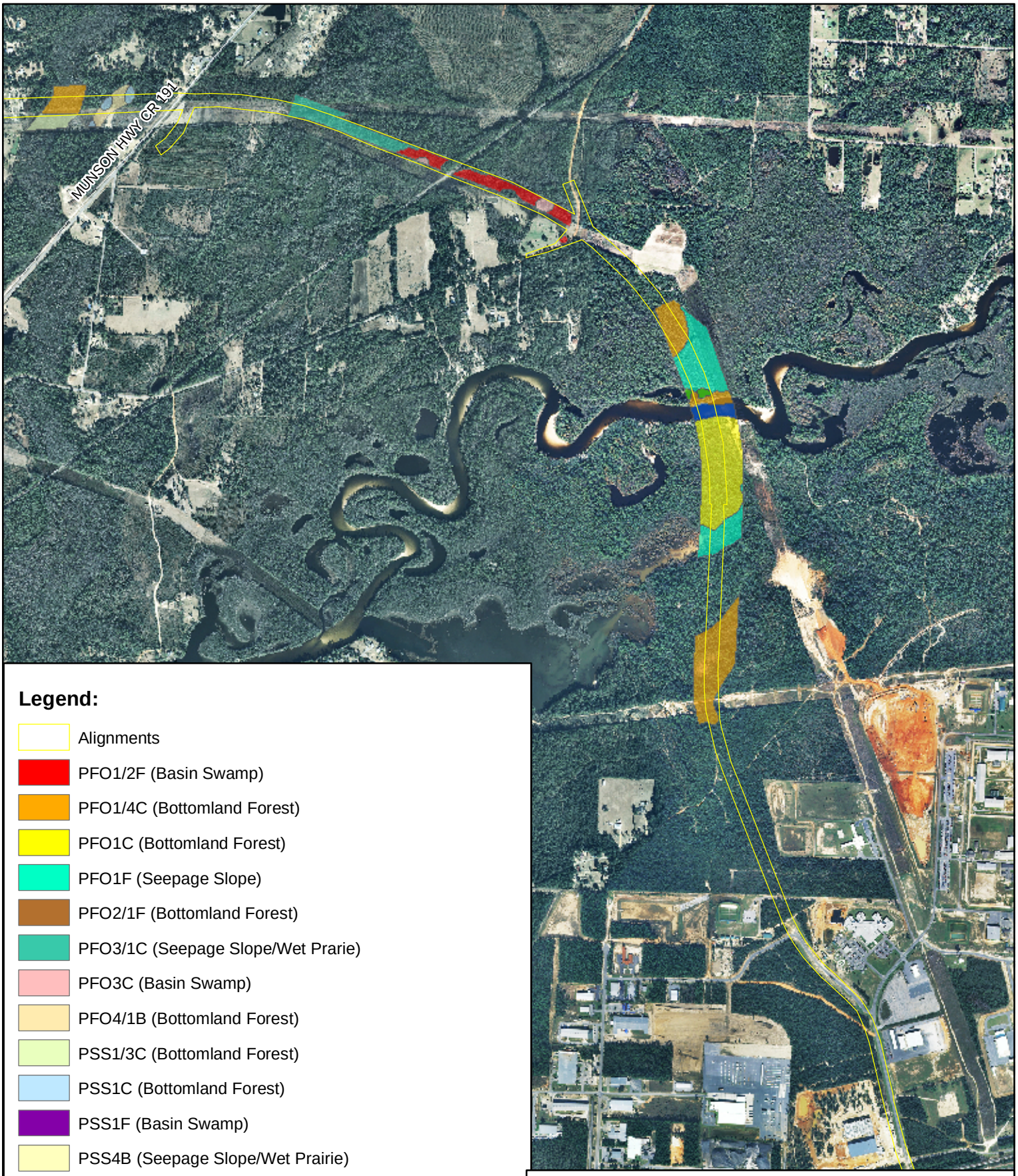
Appendix E: Wetland Exhibit



Legend:

- Alignments
- PFO1/2F (Basin Swamp)
- PFO1/4C (Bottomland Forest)
- PFO1C (Bottomland Forest)
- PFO1F (Seepage Slope)
- PFO2/1F (Bottomland Forest)
- PFO3/1C (Seepage Slope/Wet Prarie)
- PFO3C (Basin Swamp)
- PFO4/1B (Bottomland Forest)
- PSS1/3C (Bottomland Forest)
- PSS1C (Bottomland Forest)
- PSS1F (Basin Swamp)
- PSS4B (Seepage Slope/Wet Prairie)
- PUBF (Freshwater Pond)
- PUBHh (Freshwater Pond)
- R2UBH (River)

1:18,000
2010 True Color Aerial

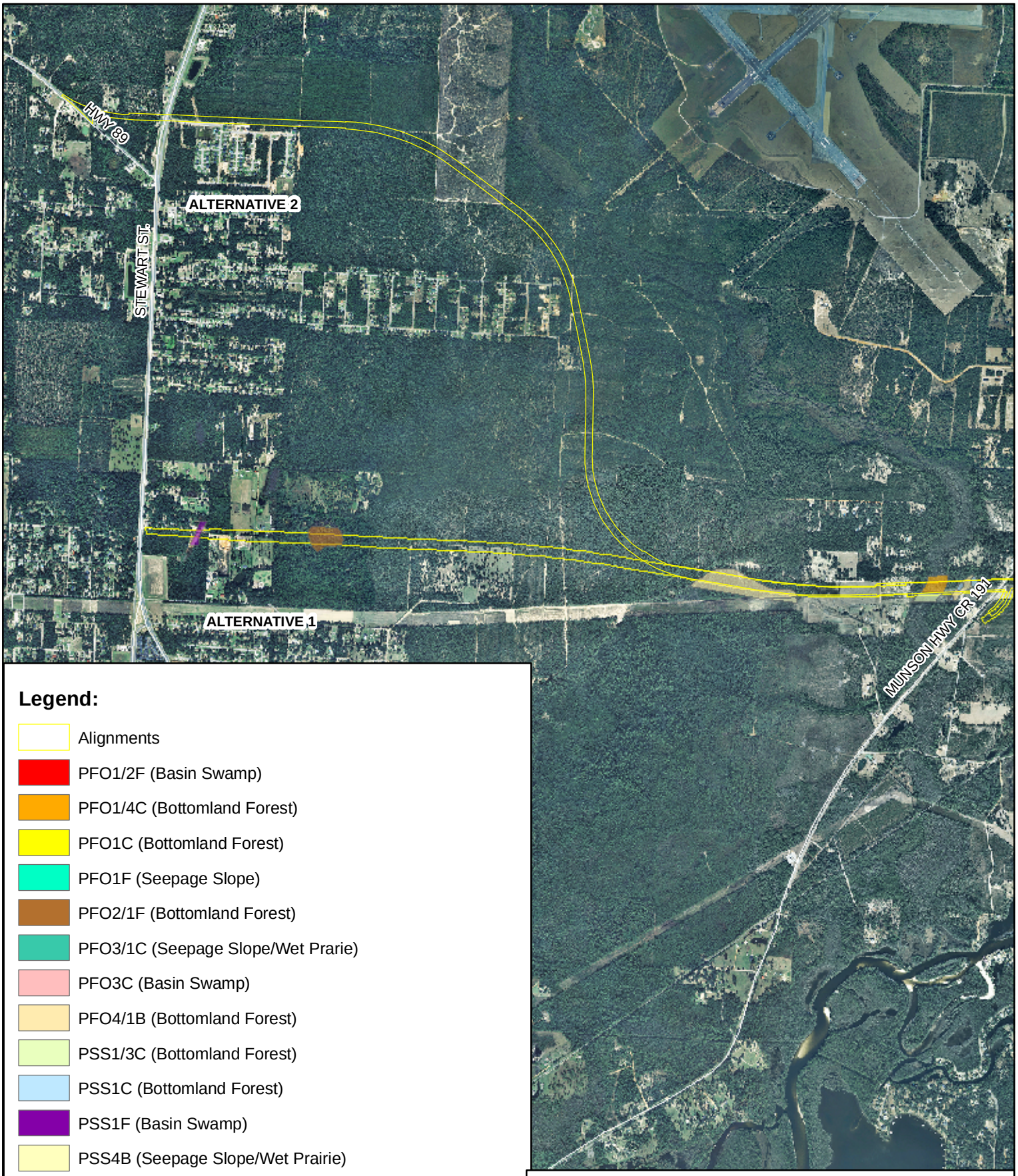
0 750 1,500 3,000 4,500 Feet

NWI Classification Map 1

SR 87 Connector PD&E

Ecological Resource Consultants, Inc.

bwp 6-4-14
ERC# 12-159



Legend:

- Alignments
- PFO1/2F (Basin Swamp)
- PFO1/4C (Bottomland Forest)
- PFO1C (Bottomland Forest)
- PFO1F (Seepage Slope)
- PFO2/1F (Bottomland Forest)
- PFO3/1C (Seepage Slope/Wet Prarie)
- PFO3C (Basin Swamp)
- PFO4/1B (Bottomland Forest)
- PSS1/3C (Bottomland Forest)
- PSS1C (Bottomland Forest)
- PSS1F (Basin Swamp)
- PSS4B (Seepage Slope/Wet Prairie)
- PUBF (Freshwater Pond)
- PUBHh (Freshwater Pond)
- R2UBH (River)

1:30,000
2010 True Color Aerial

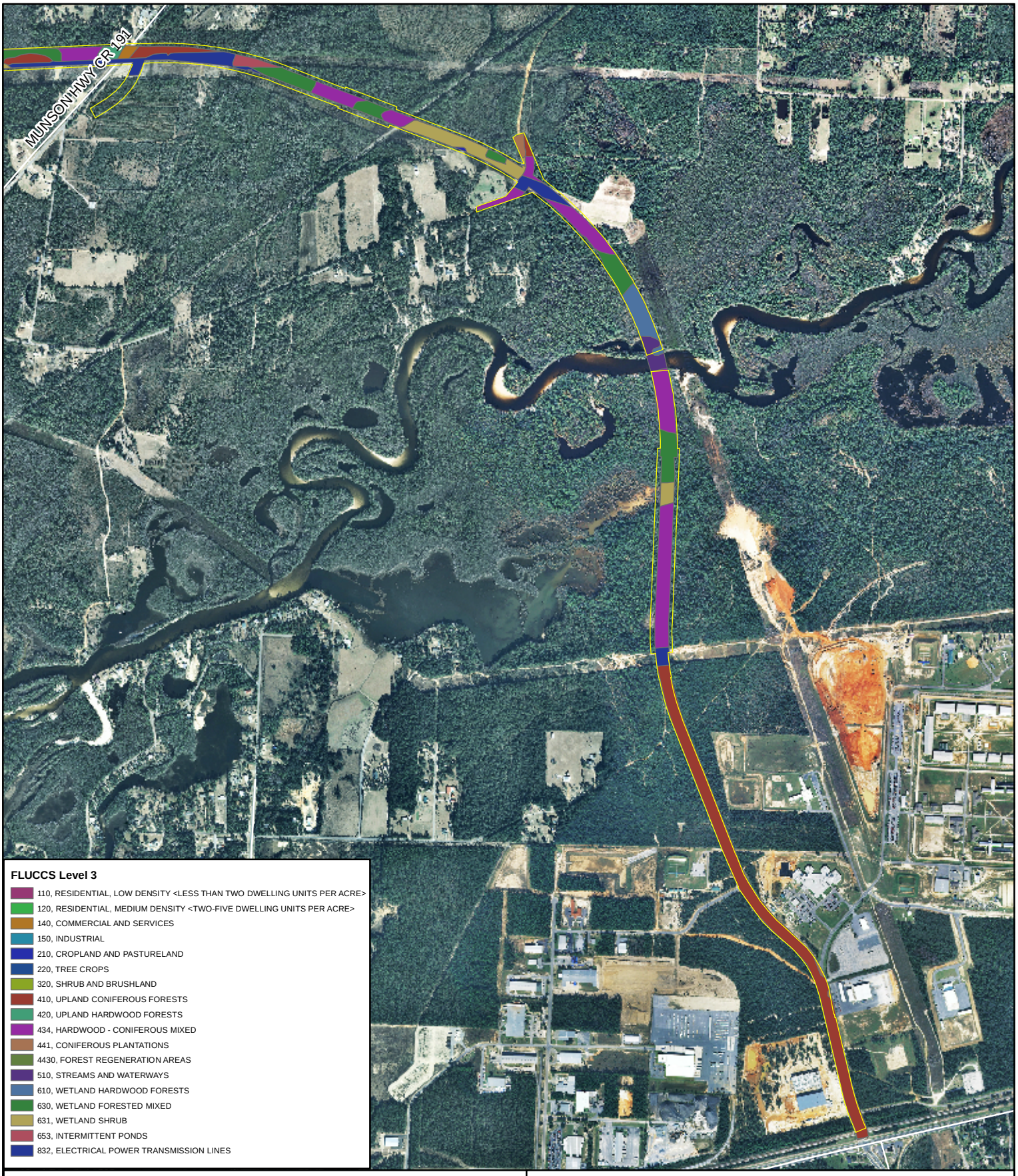
0 750 1,500 3,000 4,500 Feet

NWI Classification Map 2

SR 87 Connector PD&E

Ecological Resource Consultants, Inc.

bwp 6-4-14
ERC# 12-159



Legend:

1:18,000
2010 True Color Aerial

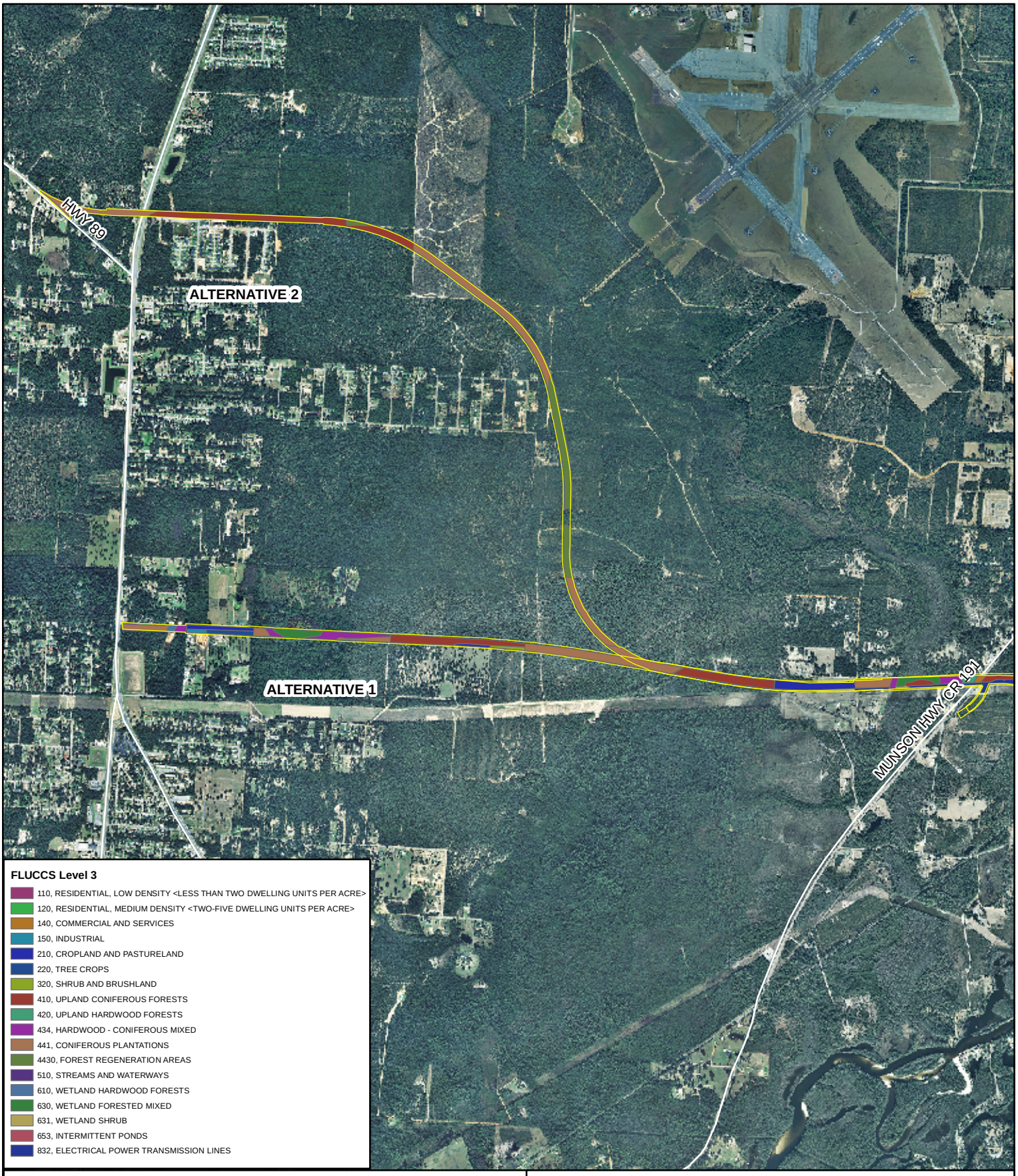
0 750 1,500 3,000 4,500 Feet

FLUCCS Map 1

SR 87 Connector PD&E

Ecological Resource Consultants, Inc.

ERC# 09-143



Legend:

Alignments

0 750 1,500 3,000 4,500 Feet

1:30,000
2010 True Color Aerial

FLUCCS Map 2

SR 87 Connector PD&E

Ecological Resource Consultants, Inc.

ERC# 09-143

Legend:

Alignments

UMAM Polygons

1, BOTTOMLAND FOREST, Shading

1A, BOTTOMLAND FOREST, Direct

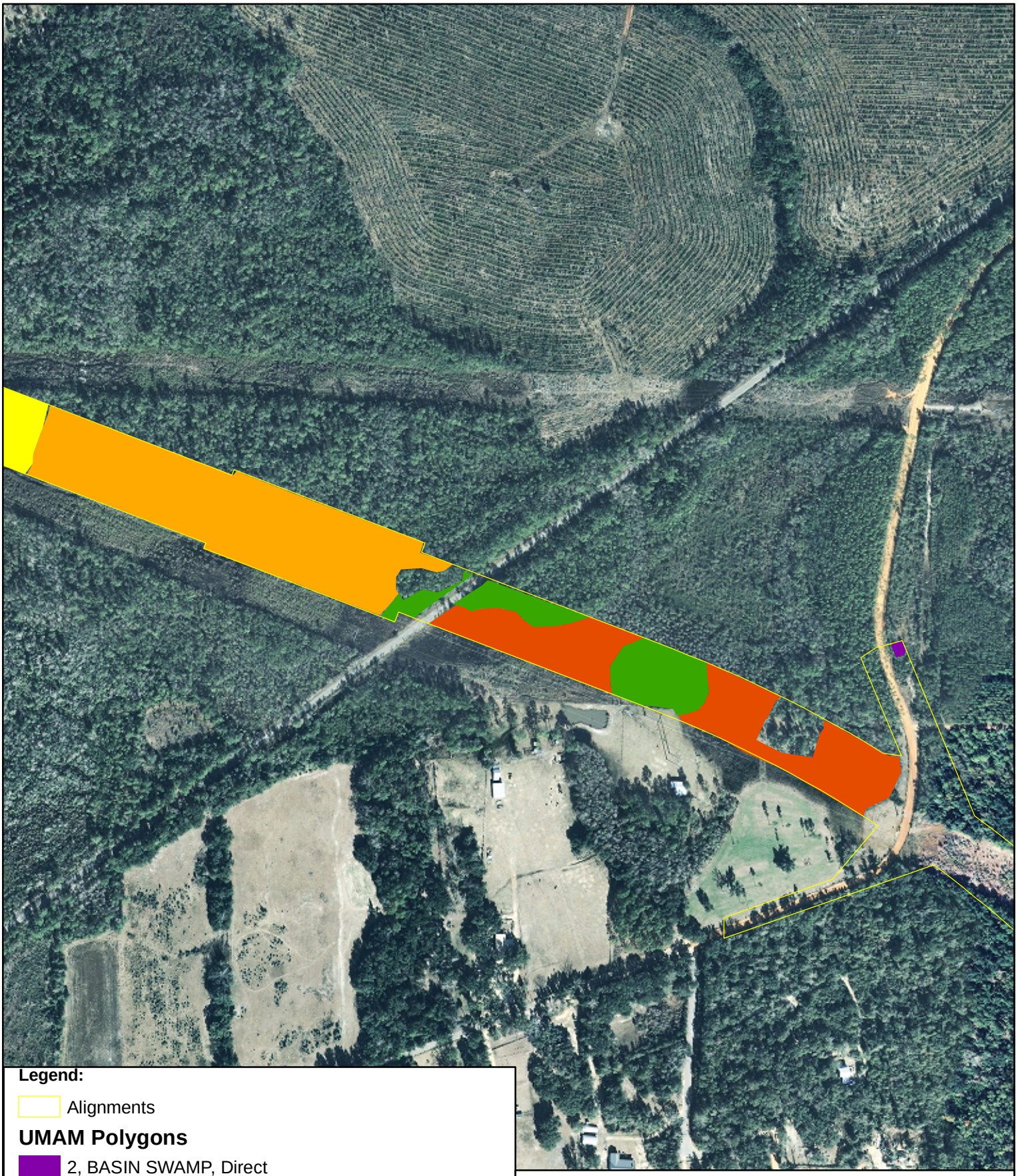
1:15,600
2010 True Color Aerial

0 650 1,300 2,600 3,900 Feet

UMAM
Polygons 1A & 1
SR 87 Connector PD&E

Ecological Resource Consultants, Inc.

ERC# 09-143



Legend:

Alignments

UMAM Polygons

- 2, BASIN SWAMP, Direct
- 3, SEEPAGE SLOPE / WET PRAIRIE, Shading
- 4, BASIN SWAMP, Shading
- 5, SEEPAGE SLOPE / WET PRAIRIE, Direct
- 6, BASIN SWAMP, Direct

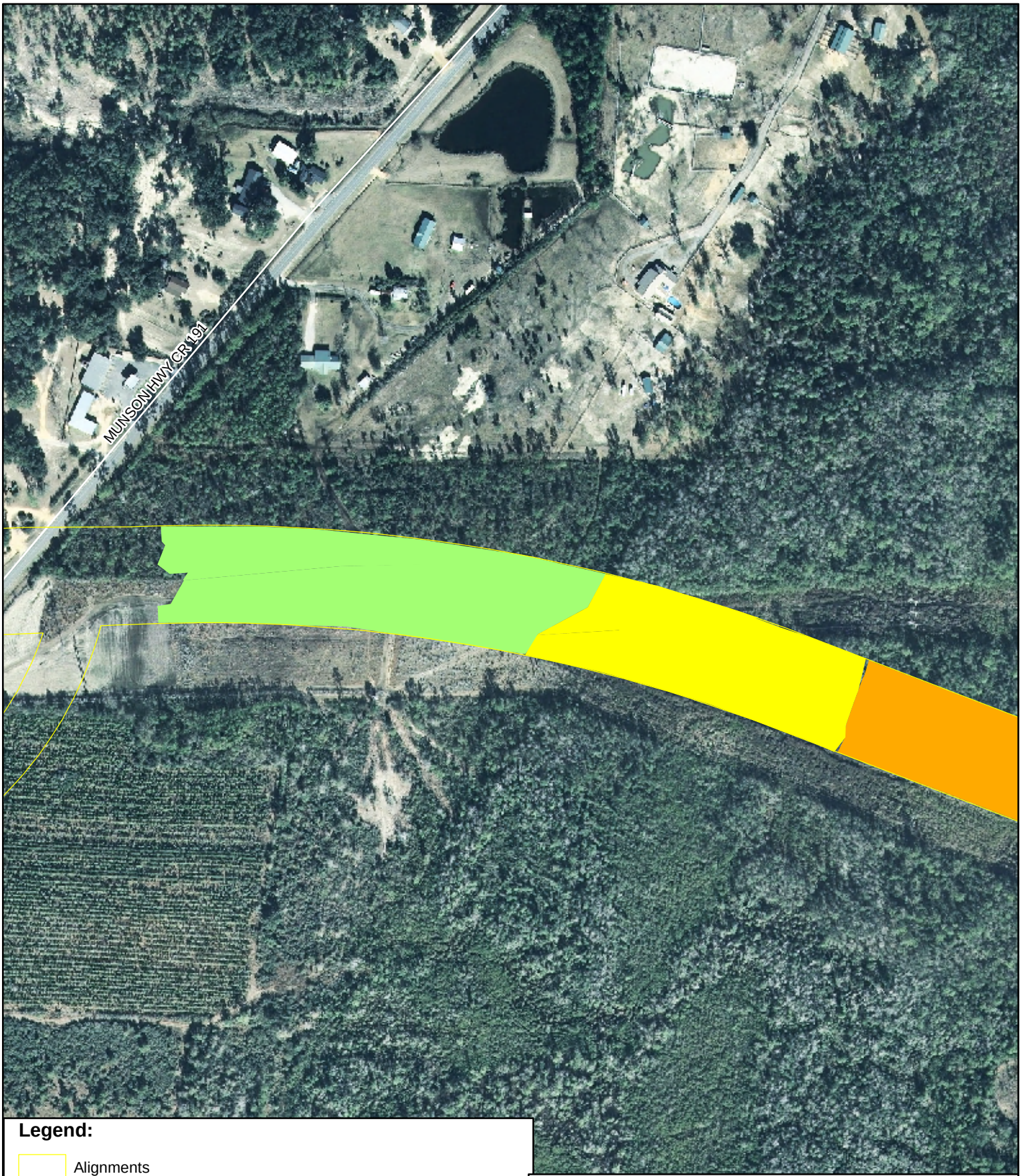
1:4,800
2010 True Color Aerial

0 200 400 800 1,200 Feet

UMAM
Polygons 2, 3, 4, & 5
SR 87 Connector PD&E

Ecological Resource Consultants, Inc.

dv 9.4.12
ERC# 09-143



Legend:

Alignments

UMAM Polygons

5, SEEPAGE SLOPE / WET PRAIRIE, Direct

6, BASIN SWAMP, Direct

7, SEEPAGE SLOPE / WET PRAIRIE, Direct

0 150 300 600 900 Feet

1:3,600

2010 True Color Aerial

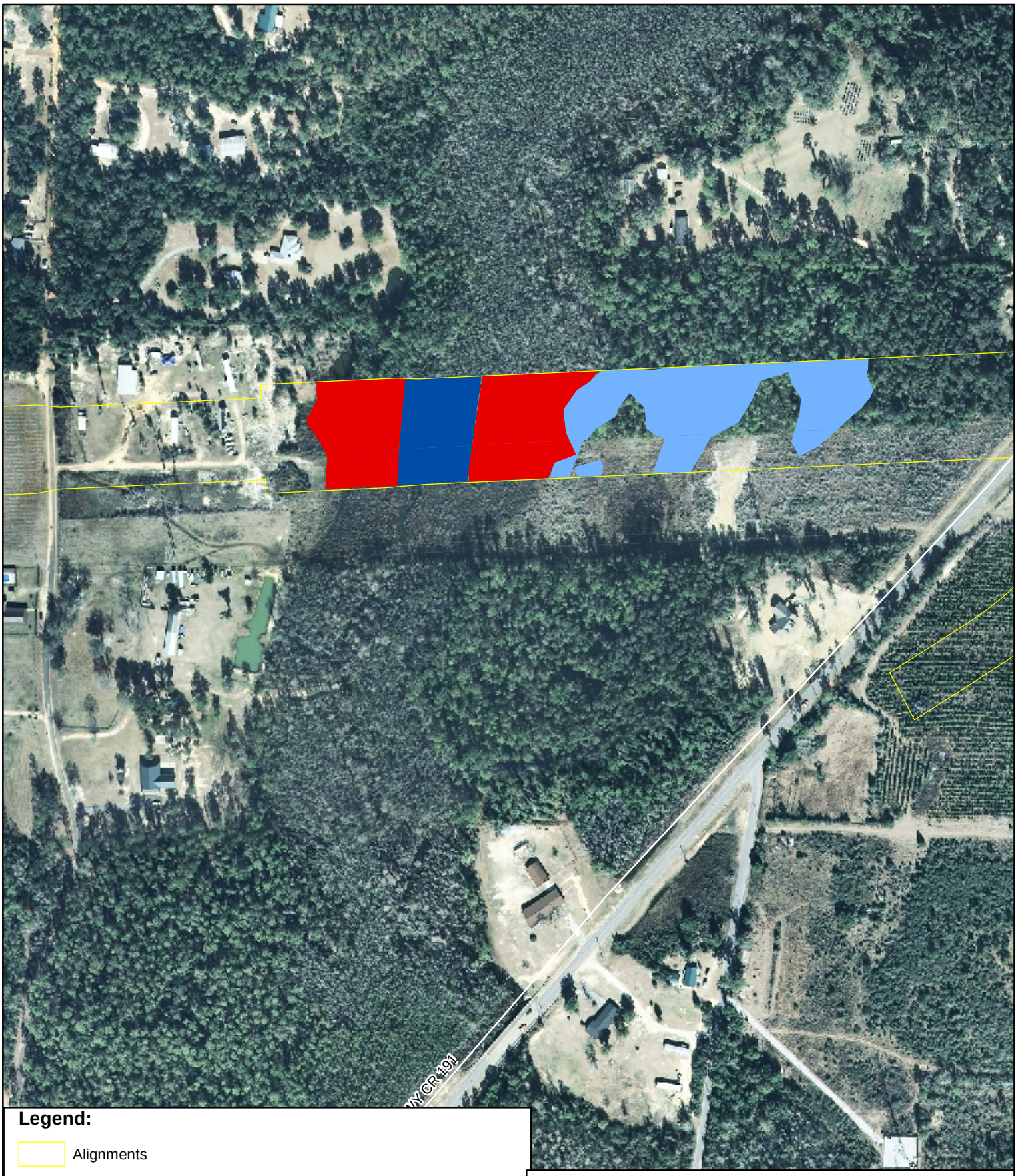
UMAM

Polygons 5, 6, & 7

SR 87 Connector PD&E

Ecological Resource Consultants, Inc.

ERC# 09-143



Legend:

Alignments

UMAM Polygons

8, SEEPAGE SLOPE / WET PRAIRIE, Shading

9, BOTTOMLAND FOREST, Shading

9A, BOTTOMLAND FOREST, Direct

1:3,600

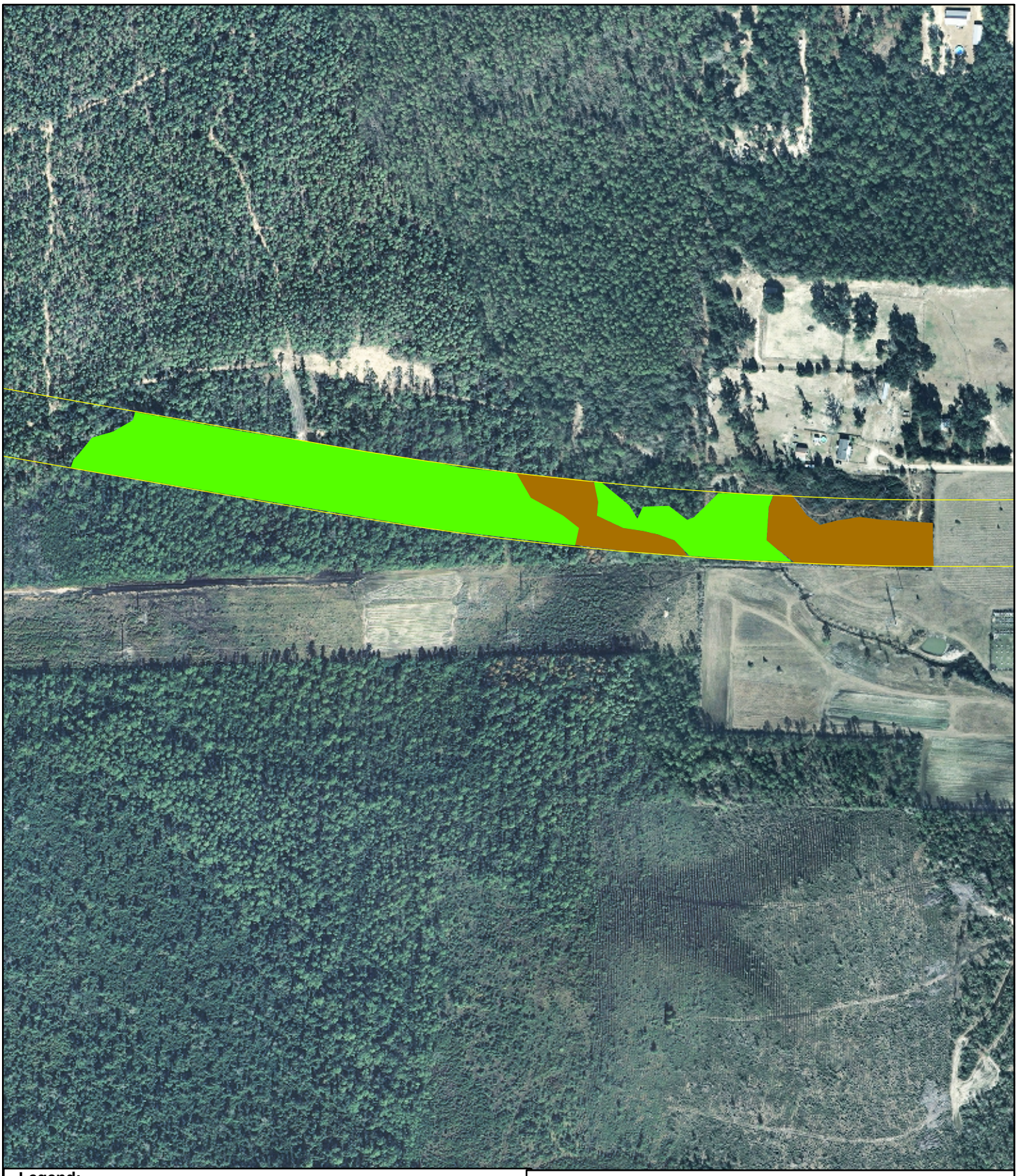
2010 True Color Aerial

0 150 300 600 900 Feet

UMAM
Polygons 8, 9, & 9A
SR 87 Connector PD&E

Ecological Resource Consultants, Inc.

ERC# 09-143



Legend:

Alignments

UMAM Polygons

10, BASIN SWAMP, Direct

11, SEEPAGE SLOPE / WET PRAIRIE, Direct

1:4,800

2010 True Color Aerial

0 200 400 800 1,200 Feet

UMAM
Polygons 10 & 11

SR 87 Connector PD&E

Ecological Resource Consultants, Inc.

ERC# 09-143

Legend:

Alignment Alternative 1

UMAM Polygons

12, DOME SWAMP, Direct

1:3,600

2010 True Color Aerial

0 150 300 600 900 Feet

UMAM

Polygon 12

SR 87 Connector PD&E

Ecological Resource Consultants, Inc.

ERC# 09-143

Legend:

Alignment Alternative 1

UMAM Polygons

13, SEEPAGE SLOPE / WET PRAIRIE, Direct

1:1,200

2010 True Color Aerial

0 50 100 200 300 Feet

UMAM
Polygon 13

SR 87 Connector PD&E

Ecological Resource Consultants, Inc.

ERC# 09-143

Legend:

- Alignments
- 12, Indirect and Cumulative Adj. Direct
- 13, Indirect and Cumulative Impacts Adj. Shading
- ERC Delineated Wetlands

1:12,000
2010 True Color Aerial

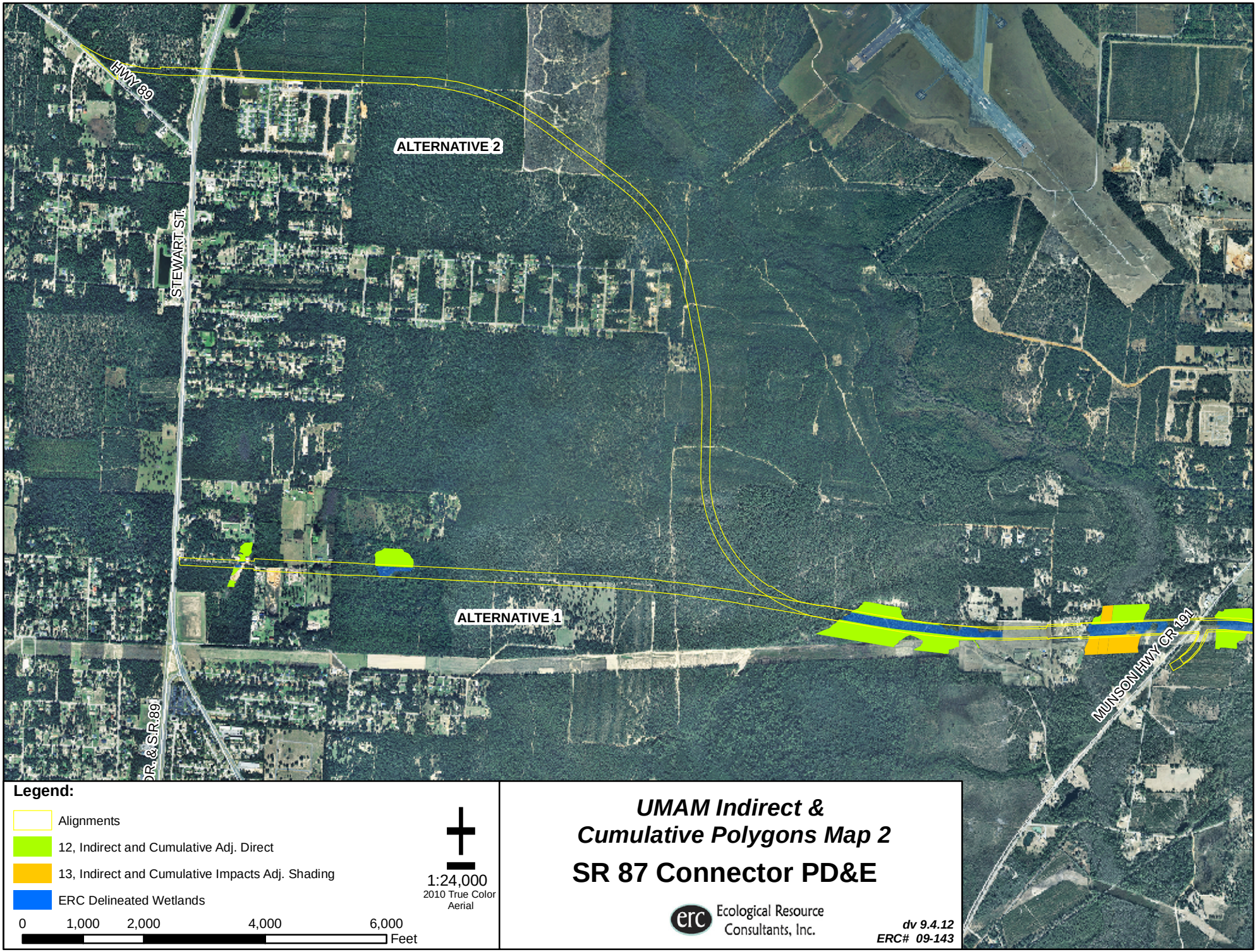
0 500 1,000 2,000 3,000 Feet

UMAM Indirect & Cumulative Polygons Map 1

SR 87 Connector PD&E

Ecological Resource Consultants, Inc.

dv 9.4.12
ERC# 09-143


HWY 89
ALTERNATIVE 2
STEWART ST.
ALTERNATIVE 1
MUNSON HWY CR 191
Legend:
Alignments
12, Indirect and Cumulative Adj. Direct
13, Indirect and Cumulative Impacts Adj. Shading
ERC Delineated Wetlands
0
1,000
2,000
4,000
6,000
Feet
1:24,000
2010 True Color Aerial
UMAM Indirect & Cumulative Polygons Map 2
SR 87 Connector PD&E
Ecological Resource Consultants, Inc.
dv 9.4.12
ERC# 09-143

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
SR 87 Connector PD&E		Polygon 1

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size
615	FNAI - Bottomland Forest	Impact (Shading)	15.13

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e.OFW, AP, other local/state/federal designation of importance)
Blackwater River	III	OFW

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

Wetlands are the floodplain of the Blackwater River, which flows south and west into the Pensacola Bay.

Assessment area description

The floodplain of the Blackwater River contains a high species diversity of hardwood evergreen and deciduous trees in the canopy and subcanopy. There is limitied development consisting of single family homes to the north and institutional and industrial development to the south. There are currently no bridges within this section of the river; however, navigation in this area is prohibited.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
State Road 90, Santa Rosa County jail, Milton	The Blackwater River is a unique landscape feature within northern Santa Rosa County and this section is an Outstanding Florida Waterway with potential Gulf sturgeon habitat.

Functions	Mitigation for previous permit/other historic use
The floodplains are high quality wetlands that collect and convey water to Pensacola Bay. The river is highly utilized by wildlife for cover and foraging. The intact floodplain helsp prevent erousion.	N/A

Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found)	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)
Black bear, deer, armadillo, amphibians, birds, reptiles, small mammals, invertebrates within the river	observed threatened plants species such as sundews, pitcher plants. There is anticipated utilization by black bear and the the river is listed as critical habitat for the Gulf sturgeon.

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

Additional relevant factors:

This floodplain area is not proposed for direct impact. There are only minor impacts, primarily from shading, proposed since the area will be bridged.

Assessment conducted by:	Assessment date(s):
Dan Van Nostrand	10/1/2011, update February 2013

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
SR 87 Connector PD&E		Polygon 1 -Blackwater River Bottomland Forest
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact (Shading)	Daniel Van Nostrand	10/1/2011, update Feb 2013

Scoring Guidance	**Optimal (10)**	**Moderate(7)**	**Minimal (4)**	**Not Present (0)**
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface water functions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

		w/o pres or current	with
.500(6)(a) Location and Landscape Support	the impact area is relatively intact on the south side of the river; however, the area on the northern side of the river runs adjacent to the powerline ROW. The ROW area have been cleared of canopy and subcanopy vegetation and some erosion and rutting is present. There are currently no impediments to wildlife species and spanning this area with a bridge will reduce future negative impact to wildlife movement.	9	7
.500(6)(b)Water Environment (n/a for uplands)	The river appears to have excellent water quality, appropriate water inputs, and evidence of a typical flooding regime. The floodplain wetlands adjacent to the river provide adequate water filtration and stabilize the soil to prevent erosion. The water flow in the river is currently unobstructed. The use of a bridge will help keep the floodplain vegetation intact to continue to stabilize the soil surface. There will also be stormwater controls on the bridge to collect untreated stormwater and convey it to treatment ponds. The piling supported bridge will not significantly impact the flow of the river.	10	9
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	The floodplain area has a high diversity of canopy and subcanopy species. Portions of the polygon have been disturbed by tree falls, which typically occurs after storm events, and the northern portion of the floodplain area has been cleared and maintained as a powerline ROW. ERC located several threatened/endangered plant species in the groundcover. The development plan will take the threatened species locations into account and any impacts will be minimized to the maximum extent practicable.	9	7

Score = sum of above scores/30 (if uplands, divide by 20)	
current or w/o pres	with
0.93	0.77

If preservation as mitigation,
Preservation adjustment factor =
Adjusted mitigation delta =

For impact assessment areas
FL = delta x acres = 2.52

Delta = [with-current]
0.17

If mitigation
Time lag (t-factor) =
Risk factor =

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
SR 87 Connector PD&E		Polygon 1A

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size
615	FNAI - Bottomland Forest	Impact (Direct)	2.95

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e.OFW, AP, other local/state/federal designation of importance)
Blackwater River	III	OFW

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

Wetlands are the floodplain of the Blackwater River, which flows south and west into the Pensacola Bay.

Assessment area description

The floodplain of the Blackwater River contains a high species diversity of hardwood evergreen and deciduous trees in the canopy and subcanopy. There is limitied development consisting of single family homes to the north and institutional and industrial development to the south. There are currently no bridges within this section of the river; however, navigation in this area is prohibited.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
State Road 90, Santa Rosa County jail, Milton	The Blackwater River is a unique landscape feature within northern Santa Rosa County and this section is an Outstanding Florida Waterway with potential Gulf sturgeon habitat.

Functions	Mitigation for previous permit/other historic use
The floodplains are high quality wetlands that collect and convey water to Pensacola Bay. The river is highly utilized by wildlife for cover and foraging. The intact floodplain helsp prevent erousion.	N/A

Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found)	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)
Black bear, deer, armadillo, amphibians, birds, reptiles, small mammals, invertebrates within the river	observed threatened plants species such as sundews, pitcher plants. There is anticipated utilization by black bear and the the river is listed as critical habitat for the Gufl sturgeon.

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

Additional relevant factors:

This portion of the floodplain is proposed for direct impact for the bridge approacht.

Assessment conducted by:	Assessment date(s):
Dan Van Nostrand	4/1/2012, update Feb 2013

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
SR 87 Connector PD&E		Polygon 1A -Blackwater River Bottomland Forest
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact (Direct)	Daniel Van Nostrand	4/1/2012, update February 2013

Scoring Guidance	**Optimal (10)**	**Moderate(7)**	**Minimal (4)**	**Not Present (0)**
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface water functions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

		w/o pres or current	with
.500(6)(a) Location and Landscape Support	the impact area is relatively intact on the south side of the river; however, the area on the northern side of the river runs adjacent to the powerline ROW. The ROW area have been cleared of canopy and subcanopy vegetation and some erosion and rutting is present. There are currently no impediments to wildlife species. This polygon will be directly impacted, but a box culvert will be used to facilite wildlife movement of amphibians, reptiles, and small mammals through the floodplain.	9	0
.500(6)(b)Water Environment (n/a for uplands)	The river appears to have excellent water quality, appropriate water inputs, and evidence of a typical flooding regime. The floodplain wetlands adjacent to the river provide adequate water filtration and stabilize the soil to prevent erosion. The water flow in the river is currently unobstructed. This polygon is proposed for direct impact; however, box culverts will be used to maintain pre-construction flow regimes through the floodplain.	10	0
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	The floodplain area has a high diversity of canopy and subcanopy species. Portions of the polygon have been disturbed by tree falls, which typically occurs after storm events, and the northern portion of the floodplain area has been cleared and maintained as a powerline ROW. ERC located several threatened/endangered plant species in the groundcover. The development plan will take the threatened species locations into account and any impacts will be minimized to the maximum extent practicable.	9	0

Score = sum of above scores/30 (if uplands, divide by 20)	
current or w/o pres	with
0.93	0.00

If preservation as mitigation,
Preservation adjustment factor =
Adjusted mitigation delta =

For impact assessment areas
FL = delta x acres = 2.75

Delta = [with-current]
0.93

If mitigation
Time lag (t-factor) =
Risk factor =

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
SR 87 Connector PD&E		Polygon 2

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size
617	FNAI - Basin Swamp	Impact (Direct)	0.04

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e.OFW, AP, other local/state/federal designation of importance)
Blackwater River	III	N/A

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

This is hydrologically connected to the adjacent polygon proposed for shading, Polygon 3. These wetlands connect to the Blackwater River via overland sheet flow.

Assessment area description

This basin wetland is fire suppressed with an appropriate mix of canopy and subcanopy species, but with a shrub layer of woody species that would typically be in coppice if fire regularly maintained this area.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
Blackwater Heritage Trail	None

Functions	Mitigation for previous permit/other historic use
This wetlands provides water filtration, water retention, foraging and habitat for wildlife.	N/A

Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found)	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)
Black bear, deer, armadillo, amphibians, birds, reptiles, small mammals, invertebrates within the river	observed threatened plans species such as sundews, pitcher plants. There is anticipated utilization by black bear and the river is listed as critical habitat for the Gulf sturgeon.

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

Additional relevant factors:

none

Assessment conducted by:	Assessment date(s):
Dan Van Nostrand	Oct-11

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
SR 87 Connector PD&E		Polygon 2 - Basin Swamp
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact (Direct)	Daniel Van Nostrand	Oct-11

Scoring Guidance	Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface water functions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

.500(6)(a) Location and Landscape Support	w/o pres or current: 9	with: 0	This is a geographically isolated wetland that has unlimited wildlife access and still provides the functions to wildlife and downstream wetlands that it would provide in optimal condition. The fire suppressed understory slightly limits the wildlife utilization of this wetland system.
.500(6)(b)Water Environment (n/a for uplands)	w/o pres or current: 9	with: 0	This wetland has appropriate hydrophytic vegetation and appears to support the appropriate hydroperiod. The wetland lacks community zonation because the fire regime is not adequate to maintain the subcanopy and shrub strata woody species as coppice. There is no evidence of siltation in this wetland from surrounding land uses.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	w/o pres or current: 8	with: 0	The canopy of this wetland is appropriate; however the groundcover should be diverse but is not due to the fire suppressed shrub and sub-canopy.

Score = sum of above scores/30 (if uplands, divide by 20)		
current or w/o pres: 0.87	with: 0.00	

If preservation as mitigation,
Preservation adjustment factor =
Adjusted mitigation delta =

For impact assessment areas
FL = delta x acres = 0.03

Delta = [with-current]
0.87

If mitigation
Time lag (t-factor) =
Risk factor =

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
SR 87 Connector PD&E		Polygon 3

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size
643	Seepage Slope / Wet Prairie	Impact (Direct)	2.02

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e.OFW, AP, other local/state/federal designation of importance)
Blackwater River	III	N/A

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

This seepage slope/wet prairie (ss/wp) grades into a deeper basin swamp wetland. The general water flow is to the south and west towards the Blackwater River and eventually the Pensacola Bay.

Assessment area description

The ss/wp is fire suppressed and has a dense canopy of pine and bay trees. There are portions of the wetland with a more open canopy that have allowed the growth of a diverse herbaceous groundcover.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
Blackwater Heritage Trail, Frosted Flatwoods Salamander Critical Habitat Unit RFS2 Subunit A	None

Functions	Mitigation for previous permit/other historic use
This wetlands provides water filtration, water retention, foraging and habitat for wildlife.	N/A

Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found)	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)
Black bear, deer, armadillo, amphibians, birds, reptiles, small mammals, invertebrates within the river	observed threatened plans species such as sundews, pitcher plants. There is anticipated utilization by black bear and the river is listed as critical habitat for the Gulf sturgeon. Further, there is an historic Flatwoods salamander with critical habitat in the vicinity of this wetland.

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

Additional relevant factors:

Located within Flatwoods Salamander critical habitat unit.

Assessment conducted by:	Assessment date(s):
Dan Van Nostrand	Oct-11

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
SR 87 Connector PD&E		Polygon 3 - SS/WP
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact (Shading)	Daniel Van Nostrand	Oct-11

Scoring Guidance
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed

Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)
Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface water functions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

.500(6)(a) Location and Landscape Support	w/o pres or current: 9	with: 8
This wetland polygon borders deeper basin swamp wetland polygons and provides a buffer to the deeper wetlands. There is little development surrounding this polygon so access to wildlife is not limited. This wetland is not fragmented and still provides water filtration and retention benefits to downstream receiving waterways. such as Clear Creek and Blackwater River. This wetland polygon is within the proposed Corridor 1 and Corridor 2 alignments and is proposed for a shading impact.		
.500(6)(b)Water Environment (n/a for uplands)	w/o pres or current: 8	with: 8
This wetland has appropriate hydrophytic vegetation and appears to support the appropriate hydroperiod. The wetland lacks community zonation because the fire regime is not adequate to maintain the subcanopy and shrub strata woody species as coppice. There is no evidence of siltation in this wetland from surrounding land uses. There are hydric soils present. This area is proposed for direct impact by Corridor 1 or Corridor 2. a bridge will be used to traverse this wetland area which will prevent damming and subsequent ponding of water, which would alter the wetlands outside of the corridor areas.		
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	w/o pres or current: 7	with: 6
The canopy in this wetland has approximately 100 trees per acre which is too dense for a typical seepage slope / wet prairie; however, there is substantial groundcover vegetation including wiregrass throughout the polygon. Typically, fires would manage these wetlands creating an open canopy and sub-canopy and encouraging growth of a diverse pyrogenic herbaceous groundcover. Approximately 20% of this wetland system has been opened up by tree falls and powerline ROWs. These opened areas had the greatest diversity and contained threatened / endangered plant species. This polygon is proposed for a shading impact by either Corridor 1 or Corridor 2. Bridging the wetland will shade the corridor area, but allow for light penetration to maintain an appropriate groundcover once the shrub layer is removed.		

Score = sum of above scores/30 (if uplands, divide by 20)	
current or w/o pres: 0.80	with: 0.73

If preservation as mitigation,
Preservation adjustment factor =
Adjusted mitigation delta =

For impact assessment areas
FL = delta x acres = 0.13

Delta = [with-current]
0.07

If mitigation
Time lag (t-factor) =
Risk factor =

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
SR 87 Connector PD&E		Polygon 4

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size
617	Basin Swamp	Impact (Direct)	4.15

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e.OFW, AP, other local/state/federal designation of importance)
Blackwater River	III	N/A

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

This is an interior, deeper wetland that is buffered on either side by seepage slope / wet prairie. The wetlands convey water to the south towards the Blackwater River via overland sheetflow.

Assessment area description

This basin wetland is fire suppressed with an appropriate mix of canopy and subcanopy species, but with a shrub layer of woody species that would typically be in coppice if fire regularly maintained this area.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
Blackwater Heritage Trail, Frosted Flatwoods Salamander Critical Habitat Unit RFS2 Subunit A	None

Functions	Mitigation for previous permit/other historic use
This wetlands provides water filtration, water retention, foraging and habitat for wildlife.	N/A

Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found)	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)
Black bear, deer, armadillo, amphibians, birds, reptiles, small mammals, invertebrates within the river	observed threatened plans species such as sundews, pitcher plants. There is anticipated utilization by black bear and the river is listed as critical habitat for the Gulf sturgeon. Further, there is an historic Flatwoods salamander with critical habitat in the vicinity of this wetland.

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

Additional relevant factors:

none

Assessment conducted by:	Assessment date(s):
Dan Van Nostrand	Oct-11

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
SR 87 Connector PD&E		Polygon 4 - Basin Swamp
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact (Shading)	Daniel Van Nostrand	Oct-11

Scoring Guidance
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed

Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)
Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface water functions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

.500(6)(a) Location and Landscape Support	w/o pres or current: 9	with: 8
This wetland polygon is buffered by adjacent seepage slope/wet prairie and I undeveloped along its entire boundary. There is no limit to wildlife utilization and the wetland provides optimal function to downstream aquatic environments. There are no impediments downstream of this polygon and water flows via overland sheetflow to the Blackwater River an OFW. This area is proposed for a shading by either Corridor 1 or Corridor 2. Flow characteristics will be maintained by using bridge spans.		
.500(6)(b)Water Environment (n/a for uplands)	w/o pres or current: 9	with: 8
This wetland has appropriate hydrophytic vegetation and appears to support the appropriate hydroperiod. The wetland lacks community zonation because the fire regime is not adequate to maintain the subcanopy and shrub strata woody species as coppice. There is no evidence of siltation in this wetland from surrounding land uses. There are hydric soils present. This area is proposed for direct impact by Corridor 1 or Corridor 2. This wetland polygon will be bridged by corridors 1 and 2, which will help to maintain the hydrology and flow regime of this wetland.		
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	w/o pres or current: 9	with: 6
The canopy of this wetland is appropriate with a mix of cypress, tupelo, and large slash pine. The shrub layer is comprised primarily of myrtle-leaf holly and large titi. The groundcover is extremely diverse with wiregrass, beakrush, yellow-eyed grass, hatpins, and pitcher plants (including parrot pitcher plants and white-topped pitcher plants). Trees in the canopy may be impacted by the bridge construction, but the groundcover will stay intact.		

Score = sum of above scores/30 (if uplands, divide by 20)	
current or w/o pres: 0.90	with: 0.73

If preservation as mitigation,
Preservation adjustment factor =
Adjusted mitigation delta =

For impact assessment areas
FL = delta x acres = 0.69

Delta = [with-current]
0.17

If mitigation
Time lag (t-factor) =
Risk factor =

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
SR 87 Connector PD&E		Polygon 5

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size
643	Seepage Slope / Wet Prairie	Impact (Direct)	6.35

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e.OFW, AP, other local/state/federal designation of importance)
Blackwater River	III	N/A

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

This seepage slope/wet prairie (ss/wp) grades into a deeper basin swamp wetland. The general water flow is to the south and west towards the Blackwater River and eventually the Pensacola Bay.

Assessment area description

The ss/wp is fire suppressed and has a dense canopy of pine and bay trees.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
Blackwater Heritage Trail, Frosted Flatwoods Salamander Critical Habitat Unit RFS2 Subunit A	None

Functions	Mitigation for previous permit/other historic use
This wetlands provides water filtration, water retention, foraging and habitat for wildlife.	N/A

Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found)	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)
Black bear, deer, armadillo, amphibians, birds, reptiles, small mammals, invertebrates within the river	observed threatened plans species such as sundews, pitcher plants. There is anticipated utilization by black bear and the river is listed as critical habitat for the Gulf sturgeon. Further, there is an historic Flatwoods salamander with critical habitat in the vicinity of this wetland.

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

Additional relevant factors:

Located within Flatwoods Salamander critical habitat unit.

Assessment conducted by:	Assessment date(s):
Dan Van Nostrand	10/1/2011, update February 2013

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
SR 87 Connector PD&E		Polygon 5 - SS/WP
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact (Direct)	Daniel Van Nostrand	10/1/2011, update February 2013

Scoring Guidance	Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface water functions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

		w/o pres or current	with
.500(6)(a) Location and Landscape Support	This wetland polygon is adjacent to undeveloped land to the north, south, east, and west. There is no direct limitation to wildlife movement to and from this polygon; however, Munson Highway is located in close proximity to the western boundary. This wetland is connected to the Clear Creek system primarily through a drainage ditch.	9	0
.500(6)(b)Water Environment (n/a for uplands)	This wetland has appropriate hydrophytic vegetation and appears to support the appropriate hydroperiod. The wetland lacks community zonation because the fire regime is not adequate to maintain the subcanopy and shrub strata woody species as coppice. There is no evidence of siltation in this wetland from surrounding land uses. There are hydric soils present. This area is proposed for direct impact by Corridor 1 or Corridor 2. Culverts or elevated roadways will be placed at appropriate sections of this or the adjacent basin swamp polygon to prevent damming and subsequent ponding of water, which would alter the wetlands outside of the corridor areas.	8	0
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	The canopy in this wetland has approximately 80-100 trees per acre which is too dense for a typical seepage slope / wet prairie. The dense canopy and fire-suppressed shrub layer have shaded out the typically diverse groundcover vegetation. Typically, fires would manage these wetlands creating an open canopy and sub-canopy and encouraging growth of a diverse pyrogenic herbaceous groundcover. This polygon is proposed for direct impact by either Corridor 1 or Corridor 2.	8	0

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.83	0

If preservation as mitigation,
Preservation adjustment factor =
Adjusted mitigation delta =

For impact assessment areas
FL = delta x acres = 5.29

Delta = [with-current]
0.83

If mitigation
Time lag (t-factor) =
Risk factor =

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
SR 87 Connector PD&E		Polygon 6

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size
617	Basin Swamp	Impact (Direct)	3.34

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e.OFW, AP, other local/state/federal designation of importance)
Blackwater River	III	N/A

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

This is an interior, deeper wetland that is buffered on either side by seepage slope / wet prairie. The wetlands convey water to the south towards the Blackwater River via overland sheetflow.

Assessment area description

This basin wetland is fire suppressed with an appropriate mix of canopy and subcanopy species, but with a shrub layer of woody species that would typically be in coppice if fire regularly maintained this area. The polygon is also bisected by an east-west running powerline ROW.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
Blackwater Heritage Trail, Frosted Flatwoods Salamander Critical Habitat Unit RFS2 Subunit A, and Munson Highway	None

Functions	Mitigation for previous permit/other historic use
This wetlands provides water filtration, water retention, foraging and habitat for wildlife.	N/A

Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found)	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)
Black bear, deer, armadillo, amphibians, birds, reptiles, small mammals, invertebrates within the river	observed threatened plans species such as sundews, pitcher plants. There is anticipated utilization by black bear and the river is listed as critical habitat for the Gulf sturgeon. Further, there is an historic Flatwoods salamander with critical habitat in the vicinity of this wetland.

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

Additional relevant factors:

none

Assessment conducted by:	Assessment date(s):
Dan Van Nostrand	10/1/2011, update February 2013

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
SR 87 Connector PD&E		Polygon 6 - Basin Swamp
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact (Direct)	Daniel Van Nostrand	10/1/2011, update February 2013

Scoring Guidance	Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface water functions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

.500(6)(a) Location and Landscape Support	w/o pres or current: 8	with: 0	This wetland polygon is buffered by adjacent seepage slope/wet prairie and is undeveloped along 75% of its boundary. There are partial limitations to wildlife utilization due to the proximity of residential development. The habitat value has been slightly altered by the powerline ROW; however, there are no impediments downstream of this polygon and water flows via overland sheet flow to the Blackwater River an OFW. This area is proposed for impact by either Corridor 1 or Corridor 2. Flow characteristics will be maintained using culverts beneath the roadway.
.500(6)(b)Water Environment (n/a for uplands)	w/o pres or current: 8	with: 0	This wetland has appropriate hydrophytic vegetation and appears to support the appropriate hydroperiod. The wetland lacks community zonation because the fire regime is not adequate to maintain the subcanopy and shrub strata woody species as coppice. There is no evidence of siltation in this wetland from surrounding land uses. There are hydric soils present. This area is proposed for direct impact by Corridor 1 or Corridor 2. Culverts or elevated roadways will be placed at appropriate sections of this or the adjacent basin swamp polygon to prevent damming and subsequent ponding of water, which would alter the wetlands outside of the corridor areas. Approximately 1/3 of the this polygon has been disturbed as a powerline ROW.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	w/o pres or current: 7	with: 0	The canopy within the non-disturbed portion of this polygon are appropriate; however, approximately 1/3 of the polygon area is maintained as a powerline easement and there is no canopy due to continual maintenance. Further, there is rutting within the power line where vegetation is not growing.

Score = sum of above scores/30 (if uplands, divide by 20)	
current or w/o pres	with
0.77	0

If preservation as mitigation,
Preservation adjustment factor =
Adjusted mitigation delta =

For impact assessment areas
FL = delta x acres = 2.56

Delta = [with-current]
0.77

If mitigation
Time lag (t-factor) =
Risk factor =

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
SR 87 Connector PD&E		Polygon 7

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size
643	Seepage Slope / Wet Prairie	Impact (Direct)	4.55

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e.OFW, AP, other local/state/federal designation of importance)
Blackwater River	III	N/A

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

This polygon is adjacent to residential development, Munson Highway, and the powerline . Due to the adjacent development ditches have been excavated through the wetlands. Water flows from the wetlands through the ditches west towards Clear Creek.

Assessment area description

This SS/WP has been affected by the adjacent residential development and the powerline ROW. The polygon has been ditched which changes the outflow of the water; however, the maintenance within the powerline ROW has increased species diversity in the groundcover.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
Blackwater Heritage Trail, Frosted Flatwoods Salamander Critical Habitat Unit RFS2 Subunit A, and Munson Highway	None

Functions	Mitigation for previous permit/other historic use
This wetlands provides water filtration, water retention, foraging and habitat for wildlife.	N/A

Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found)	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)
Black bear, deer, armadillo, amphibians, birds, reptiles, small mammals, invertebrates within the river	observed threatened plans species such as sundews, pitcher plants. There is anticipated utilization by black bear and the river is listed as critical habitat for the Gulf sturgeon. Further, there is an historic Flatwoods salamander with critical habitat in the vicinity of this wetland.

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

Additional relevant factors:

none

Assessment conducted by:	Assessment date(s):
Dan Van Nostrand	10/1/2011, update February 2013

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
SR 87 Connector PD&E		Polygon 7 - Seepage Slope/Wet Prairie
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact (Direct)	Daniel Van Nostrand	10/1/2011, update February 2013

Scoring Guidance	Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface water functions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

.500(6)(a) Location and Landscape Support w/o pres or current: 7 with: 0	This wetland polygon is adjacent to undeveloped land to the north, south, east, and west. There is no direct limitation to wildlife movement to and from this polygon; however, Munson Highway is located in close proximity to the western boundary. This wetland is connected to the Clear Creek system primarily through a drainage ditch.	
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current: 8 with: 0	This wetland has appropriate hydrophytic vegetation and appears to support the appropriate hydroperiod. The wetland lacks community zonation because the fire regime is not adequate to maintain the subcanopy and shrub strata woody species as coppice. There is no evidence of siltation in this wetland from surrounding land uses. There are hydric soils present. This area is proposed for a direct impact by Corridor 1 or Corridor 2.	
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current: 7 with: 0	The canopy within the non-disturbed portion of this polygon are appropriate; however, approximately 1/2 of the polygon area is maintained as a powerline easement and there is no canopy due to continual maintenance. This area is proposed for a direct impact bye either corridor 1 or Corridor 2.	

Score = sum of above scores/30 (if uplands, divide by 20)		If preservation as mitigation,	For impact assessment areas
current or w/o pres: 0.73	with: 0	Preservation adjustment factor =	FL = delta x acres = 3.34
		Adjusted mitigation delta =	

Delta = [with-current]	If mitigation	For mitigation assessment areas
0.73	Time lag (t-factor) =	RFG = delta/(t-factor x risk) =
	Risk factor =	

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
SR 87 Connector PD&E		Polygon 8

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size
643	Seepage Slope / Wet Prairie	Impact (Direct)	2.34

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e.OFW, AP, other local/state/federal designation of importance)
Blackwater River	III	N/A

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

This polygon is to the west of Munson Highway and directly borders the floodplain of Clear Creek. There are no obstructions to water flow from this wetland, to the floodplain, and eventually to Pensacola Bay.

Assessment area description

This SS/WP is surrounded by undeveloped land, but has been partially impacted by mechanical clearing along the powerline ROW. The mechanical clearing has mimicked fire and increased plant diversity in the groundcover. The remainder of this polygon is fire suppressed with a dense pine canopy.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
Munson Highway, Clear Creek.	None

Functions	Mitigation for previous permit/other historic use
This wetlands provides water filtration, water retention, foraging , habitat for wildlife, and creek buffer.	N/A

Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found)	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)
Black bear, deer, armadillo, amphibians, birds, reptiles, small mammals, invertebrates within the river	observed threatened plant species such as sundews, pitcher plants. There is anticipated utilization by black bear

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

Additional relevant factors:

none

Assessment conducted by:	Assessment date(s):
Dan Van Nostrand	October 2012, update February 2013

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
SR 87 Connector PD&E		Polygon 8 - Seepage Slope/Wet Prairie
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact (Direct)	Daniel Van Nostrand	October 2012, update February 2013

Scoring Guidance
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed

Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)
Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface water functions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

.500(6)(a) Location and Landscape Support w/o pres or current: 9 with: 0	This wetland polygon is adjacent to undeveloped land to the north, south, east, and west. It buffers the floodplain of Clear Creek. There is no direct limitation to wildlife movement to and from this polygon; however, Munson Highway is located in close proximity to the eastern boundary. This wetland borders the floodplain bottomland forest associated with Clear Creek and provides direct water input to the creek system and eventually Blackwater River (OFW) and Pensacola Bay. There are no barriers to the movement of water into the creek system. This wetland is proposed for a direct impact for the Clear Creek bridge approaches. The open water portion of the stream will be bridged.
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current: 8 with: 0	This wetland has appropriate hydrophytic vegetation and appears to support the appropriate hydroperiod. The wetland lacks community zonation because the fire regime is not adequate to maintain the subcanopy and shrub strata woody species as coppice. There is no evidence of siltation in this wetland from surrounding land uses. There are hydric soils present. This area is proposed for a direct impact by Corridor 1 or Corridor 2.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current: 7 with: 0	The canopy within the non-disturbed portion of this polygon are appropriate; however, approximately 1/2 of the polygon area is maintained as a powerline easement and there is no canopy due to continual maintenance. This area is proposed for a direct impact for the bridge approach.

Score = sum of above scores/30 (if uplands, divide by 20)	
current or w/o pres	with
0.8	0.00

If preservation as mitigation,
Preservation adjustment factor =
Adjusted mitigation delta =

For impact assessment areas
FL = delta x acres = 1.87

Delta = [with-current]
0.80

If mitigation
Time lag (t-factor) =
Risk factor =

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
SR 87 Connector PD&E		Polygon 9

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size
615	Bottomland Forest	Impact (Shading)	1.08

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e.OFW, AP, other local/state/federal designation of importance)
Blackwater River	III	N/A

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

This polygon includes Clear Creek and the Clear Creek floodplain and is therefore directly connected via surface flow to the Blackwater River further downstream.

Assessment area description

This floodplain/bottomland forest is relatively intact even though it is adjacent to residential development and the powerline ROW. The canopy is a mixture of hardwood evergreens and deciduous trees. The understory is diverse and contains threatened endangered plant species.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
Munson Highway, Clear Creek	Blackwater Stream (Clear Creek) bisects the floodplain/bottomland forest.

Functions	Mitigation for previous permit/other historic use
The floodplains are high quality wetlands that collect and convey water to Pensacola Bay. The creek is highly utilized by wildlife for cover and foraging. The intact floodplain helps prevent erosion, regulate water temperature, and maintain in-creek habitats.	N/A

Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found)	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)
Black bear, deer, armadillo, amphibians, birds, reptiles, small mammals, invertebrates within the river	The floodplain/bottomland forest is diverse and contains many state threatened plant species such as sundews, pitcher plants, bluestem, meadow beauty, and yellow-eyed grass. There is anticipated utilization by black bear. Clear Creek is not listed as Critical Habitat for the Gulf sturgeon or the reticulated Flatwoods salamander.

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

Additional relevant factors:

none

Assessment conducted by:	Assessment date(s):
Dan Van Nostrand	9/1/2012, update February 2013

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
SR 87 Connector PD&E		Polygon 9 - Clear Creek Floodplain/Bottomland Forest
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact (Shading)	Daniel Van Nostrand	9/1/2012, update February 2013

Scoring Guidance	**Optimal (10)**	**Moderate(7)**	**Minimal (4)**	**Not Present (0)**
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface water functions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

		w/o pres or current	with
.500(6)(a) Location and Landscape Support	The floodplain bottomland forest is bordered on the west by low density residential development and agriculture and by undeveloped land to the north, south, and east. There is little impediment to wildlife movement into this polygon. The wetland directly supports and maintains the water quality, temperature, and structure of Clear Creek. There are no impediments to water flow between the floodplain and the creek. This area is proposed for a shading impact since a bridge will be constructed over the floodplain and the creek. There are no anticipated significant impacts with bridge construction.	9	8
.500(6)(b)Water Environment (n/a for uplands)	The creek appears to have excellent water quality, appropriate water inputs, and evidence of a typical flooding regime. The floodplain wetlands adjacent to the creek provide adequate water filtration and stabilize the soil to prevent erosion. The water flow in the creek is currently unobstructed. The use of a bridge will help keep the floodplain vegetation intact to continue to stabilize the soil surface. There will also be stormwater controls on the bridge to collect untreated stormwater and convey it to treatment ponds. The piling supported bridge will not significantly impact the flow of the river.	10	8
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	The floodplain area has a high diversity of canopy and subcanopy species. Portions of the polygon have been cleared and maintained as a powerline ROW. ERC located several threatened/endangered plant species in the groundcover. The development plan will take the threatened species locations into account and any impacts will be minimized to the maximum extent practicable.	8	6

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.90	0.73

If preservation as mitigation,
Preservation adjustment factor =
Adjusted mitigation delta =

For impact assessment areas
FL = delta x acres = 0.18

Delta = [with-current]
0.17

If mitigation
Time lag (t-factor) =
Risk factor =

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
SR 87 Connector PD&E		Polygon 9A

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size
615	Bottomland Forest	Impact (Direct)	2.50

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e.OFW, AP, other local/state/federal designation of importance)
Blackwater River	III	N/A

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

This polygon includes the Clear Creek floodplain and is therefore directly connected via surface flow to the Blackwater River further downstream.

Assessment area description

This floodplain/bottomland forest is relatively intact even though it is adjacent to residential development and the powerline ROW. The canopy is a mixture of hardwood evergreens and deciduous trees. The understory is diverse and contains threatened endangered plant species.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
Munson Highway, Clear Creek	Blackwater Stream (Clear Creek) bisects the floodplain/bottomland forest.

Functions	Mitigation for previous permit/other historic use
The floodplains are high quality wetlands that collect and convey water to Pensacola Bay. The creek is highly utilized by wildlife for cover and foraging. The intact floodplain helps prevent erosion, regulate water temperature, and maintain in-creek habitats.	N/A

Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found)	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)
Black bear, deer, armadillo, amphibians, birds, reptiles, small mammals, invertebrates within the river	The floodplain/bottomland forest is diverse and contains many state threatened plant species such as sundews, pitcher plants, bluestem, meadow beauty, and yellow-eyed grass. There is anticipated utilization by black bear. Clear Creek is not listed as Critical Habitat for the Gulf sturgeon or the reticulated Flatwoods salamander.

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

Additional relevant factors:

none

Assessment conducted by:	Assessment date(s):
Dan Van Nostrand	9/1/2012, update February 2013

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
SR 87 Connector PD&E		Polygon 9A - Clear Creek Floodplain/Bottomland Forest
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact (Direct)	Daniel Van Nostrand	9/1/2012, update February 2013

Scoring Guidance	**Optimal (10)**	**Moderate(7)**	**Minimal (4)**	**Not Present (0)**
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface water functions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

.500(6)(a) Location and Landscape Support w/o pres or current: 9 — with: 0	The floodplain bottomland forest is bordered on the west by low density residential development and agriculture and by undeveloped land to the north, south, and east. There is little impediment to wildlife movement into this polygon. The wetland directly supports and maintains the water quality, temperature, and structure of Clear Creek. There are no impediments to water flow between the floodplain and the creek. This area is proposed for a direct impact for the bridge approaches; however, the open water portion of the creek will be bridged.
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current: 10 — with: 0	The creek appears to have excellent water quality, appropriate water inputs, and evidence of a typical flooding regime. The floodplain wetlands adjacent to the creek provide adequate water filtration and stabilize the soil to prevent erosion. The water flow in the creek is currently unobstructed. The use of a bridge over the open water poriton of the creek will minmize upstream flooding. This floodplain/bottomland forest polygon is proposed for direct impact for the bridge approaches.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current: 8 — with: 0	The floodplain area has a high diversity of canopy and subcanopy species. Portions of the polygon have been cleared and maintained as a powerline ROW. ERC located several threatened/endangered plant species in the groundcover. The development plan will take the threatened species locations into account and any impacts will be minimized to the maximum extent practicable. This polygon is proposed for a direct impact for the bridge approaches.

Score = sum of above scores/30 (if uplands, divide by 20)	
current or w/o pres	with
0.90	0.00

If preservation as mitigation,
Preservation adjustment factor =
Adjusted mitigation delta =

For impact assessment areas
FL = delta x acres = 2.25

Delta = [with-current]
0.90

If mitigation
Time lag (t-factor) =
Risk factor =

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
SR 87 Connector PD&E		Polygon 10

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size
617	FNAI - Basin Swamp	Impact (Direct)	2.75

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e.OFW, AP, other local/state/federal designation of importance)
Blackwater River	III	N/A

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

This is an interior, deeper wetland that is buffered on either side by seepage slope / wet prairie. The wetlands convey water to the south towards the Blackwater River via overland sheetflow.

Assessment area description

This basin wetland is fire suppressed within half of the area and the other half has been cleared, but with a shrub layer of woody species that would typically be in coppice if fire regularly maintained this area. The polygon is also bisected by an east-west running powerline ROW.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
None	None

Functions	Mitigation for previous permit/other historic use
This wetlands provides water filtration, water retention, foraging and habitat for wildlife.	N/A

Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found)	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)
Black bear, deer, armadillo, amphibians, birds, reptiles, small mammals, invertebrates within the river	White topped pitcher plant was observed in this wetland and it is anticipated that other threatened plant species would be present with periodic fire. This area is also most likely used by the black bear population in the vicinity.

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

None during field surveys

Additional relevant factors:

none

Assessment conducted by:	Assessment date(s):
Dan Van Nostrand	10/1/2012, update February 2013

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
SR 87 PD&E		Polygon 10 - Basin Swamp
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact (Direct)	Daniel Van Nostrand	10/1/2012, update February 2013

Scoring Guidance	Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface water functions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

		w/o pres or current	with
.500(6)(a) Location and Landscape Support	This wetland polygon is bordered by undeveloped land to the west and north, agricultural lands and powerline ROW to the south and agricultural lands to the east. Portions of this polygon have been cleared which decrease their value for wildlife utilization. The proximal residential development and adjacent agricultural lands somewhat limit the wildlife movement to and from this polygon. The adjacent wet prairie / seepage slope has been ditched, which affects the localized water flow to and from the basin swamp. This area is proposed for a direct impact by either alternative 1 or alternative 2.	6	0
.500(6)(b)Water Environment (n/a for uplands)	This wetland has appropriate hydrophytic vegetation and appears to support the appropriate hydroperiod. The wetland lacks community zonation because the fire regime is not adequate to maintain the subcanopy and shrub strata woody species as coppice and because the canopy and subcanopy have been cleared within the powerline ROW and agricultural area. There is no evidence of siltation in this wetland from surrounding land uses. There are hydric soils present. This area is proposed for direct impact by alternative 1 or alternative 2. Culverts or elevated roadways will be placed at appropriate sections of this or the adjacent basin swamp polygon to prevent damming and subsequent ponding of water, which would alter the wetlands outside of the corridor areas.	7	0
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	The majority of this basin swamp polygon has been disturbed by clearing either for agricultural operations or for powerline ROW maintenance. The cleared portions lack the appropriate canopy, but have divers groundcover due to the light penetration to the ground. Typical basin swamps would have diverse canopies and varied groundcover in gaps between canopy. This polygon is proposed for direct impact by either alternative 1 or alternative 2.	6	0

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.63	0

If preservation as mitigation,
Preservation adjustment factor =
Adjusted mitigation delta =

For impact assessment areas
FL = delta x acres = 1.74

Delta = [with-current]
0.63

If mitigation
Time lag (t-factor) =
Risk factor =

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
SR 87 Connector PD&E		Polygon 11

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size
643	FNAI - Seepage Slope / Wet Prairie	Impact (Direct)	8.14

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e.OFW, AP, other local/state/federal designation of importance)
Blackwater River	III	N/A

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

The seepage slope / wet prairie drains southeast toward the Blackwater River via overland sheetflow and through a confined ditch that appears to be excavated through the adjacent agricultural field.

Assessment area description

The ss/wp is fire suppressed and has a dense canopy of pine and bay trees and the remainder has been maintained as a powerline ROW and agricultural field.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
None	None

Functions	Mitigation for previous permit/other historic use
This wetlands provides water filtration, water retention, foraging and habitat for wildlife.	N/A

Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found)	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)
Black bear, deer, armadillo, amphibians, birds, reptiles, small mammals, invertebrates within the river	White topped pitcher plant was observed in this wetland and it is anticipated that other threatened plant species would be present with periodic fire. This area is also most likely used by the black bear population in the vicinity.

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

None during field surveys

Additional relevant factors:

none

Assessment conducted by:	Assessment date(s):
Dan Van Nostrand	10/1/2012, update February 2013

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
SR 87 PD&E		Polygon 11 - Seepage Slope/Wet Prairie
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact (Direct)	Daniel Van Nostrand	10/1/2012, update February 2013

Scoring Guidance	Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface water functions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

.500(6)(a) Location and Landscape Support	w/o pres or current: 7	with: 0	This wetland polygon is adjacent to undeveloped land to the north, east, and west and is bordered by the powerline ROW and an agricultural field to the south. There is minor limitation to wildlife movement to and from this polygon due to the agricultural land. This wetland is connected south through wetlands and a confined ditch through the agricultural land. This wetland is proposed for direct impact by either alternative 1 or alternative 2.
.500(6)(b)Water Environment (n/a for uplands)	w/o pres or current: 8	with: 0	This wetland has appropriate hydrophytic vegetation and appears to support the appropriate hydroperiod. The wetland lacks community zonation because the fire regime is not adequate to maintain the subcanopy and shrub strata woody species as coppice. There is no evidence of siltation in this wetland from surrounding land uses. There are hydric soils present. This area is proposed for a direct impact by alternative1 or alternative 2.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	w/o pres or current: 7	with: 0	The canopy within the non-disturbed portion of this polygon are appropriate; however, approximately 1/2 of the polygon area is maintained as a powerline easement and there is no canopy due to continual maintenance. This area is proposed for a direct impact by either alternative 1 or alternative 2.

Score = sum of above scores/30 (if uplands, divide by 20)	
current or w/o pres	with
0.73	0

If preservation as mitigation,
Preservation adjustment factor =
Adjusted mitigation delta =

For impact assessment areas
FL = delta x acres = 5.97

Delta = [with-current]
0.73

If mitigation
Time lag (t-factor) =
Risk factor =

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
SR 87 Connector PD&E - Alternative 1 only		Polygon 12

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size
630	FNAI - Dome Swamp	Impact (Direct)	1.43

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e.OFW, AP, other local/state/federal designation of importance)
Blackwater River	III	N/A

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

This is an isolated wetland system that is surrounded by well drained sandhill uplands.

Assessment area description

This dome swamp wetland is fire suppressed on the exterior with an appropriate mix of canopy and subcanopy species in the center. If fire periodically burned this wetland, the out rim would contain more herbaceous species than the current woody coverage.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
SR 87 North	None

Functions	Mitigation for previous permit/other historic use
This wetlands provides water filtration, water retention, foraging and habitat for wildlife.	N/A

Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found)	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)
Black bear, deer, armadillo, amphibians, birds, reptiles, small mammals, invertebrates within the river	No threatened or endangered species were observed in this polygon area, but it is anticipated that a similar plant composition to the other basin wetlands would exist with more frequent fires.

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

None during field survey

Additional relevant factors:

none

Assessment conducted by:	Assessment date(s):
Dan Van Nostrand	10/1/2011, update February 2013

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
SR 87 Connector PD&E - Alternative 1 only		Polygon 12 - Dome Swamp
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact (Direct)	Daniel Van Nostrand	10/1/2011, update February 2013

Scoring Guidance	Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface water functions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

	w/o pres or current	with	
.500(6)(a) Location and Landscape Support	9	0	This is a geographically isolated wetland that has unlimited wildlife access to the east, south, and west and still provides the functions to wildlife and downstream wetlands that it would provide in optimal condition. The fire suppressed understory slightly limits the wildlife utilization of this wetland system; however it is suitable habitat for many breeding amphibians and reptiles since there is evidence that it fill with water ephemerally and does not contain fish. This wetland is proposed for direct impact by alternative 1.
.500(6)(b)Water Environment (n/a for uplands)	9	0	This wetland has appropriate hydrophytic vegetation and appears to support the appropriate hydroperiod that is suitable for many species that require ephemeral ponds as a component of their life cycles. The wetland lacks community zonation along the ecotone adjacent to the upland because the fire regime is not adequate to maintain the subcanopy and shrub strata woody species as coppice. This wetland is proposed for direct impact by alternative 1.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	8	0	The canopy of this wetland is appropriate; however the groundcover should be diverse along the ecotone but is not due to the fire suppressed shrub and sub-canopy. This polygon is proposed for direct impact by alternative 1.

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.87	0

If preservation as mitigation,
Preservation adjustment factor =
Adjusted mitigation delta =

For impact assessment areas
FL = delta x acres = 1.24

Delta = [with-current]
0.87

If mitigation
Time lag (t-factor) =
Risk factor =

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
SR 87 Connector PD&E - Alternative 1 only		Polygon 13

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size
643	Seepage Slope / Wet Prairie	Impact (Direct)	0.25

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e.OFW, AP, other local/state/federal designation of importance)
Blackwater River	III	N/A

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

This seepage slope / wet prairie polygon is bisected by a dirt road and connected under the road via a culvert; however, the wetland is isolated.

Assessment area description

The ss/wp is fire suppressed, has been bisected by a dirt road, and has been cleared.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
SR 87 North	None

Functions	Mitigation for previous permit/other historic use
This wetlands provides water filtration, water retention, foraging and habitat for wildlife.	N/A

Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found)	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)
Black bear, deer, armadillo, amphibians, birds, reptiles, small mammals, invertebrates within the river	No T&E plant species were observed within this wetland; however, with appropriate management it is expected that there would be higher species diversity.

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

None during field survey

Additional relevant factors:

none

Assessment conducted by:	Assessment date(s):
Dan Van Nostrand	10/1/2011, update February 2013

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
SR 87 Connector PD&E - Alternative 1 only		Polygon 13 - Seepage Slope/Wet Prairie
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact (Direct)	Daniel Van Nostrand	10/1/2011, update February 2013

Scoring Guidance
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed

Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)
Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface water functions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

.500(6)(a) Location and Landscape Support	w/o pres or current: 6	with: 0
This wetland polygon is adjacent to undeveloped land and low density residential development. There is minor limitation to wildlife movement to and from this polygon due to the residential land. This wetland is isolated and has been cut in half by Oakland Drive, a dirt road. There is a culvert beneath the road; however it has impacted the normal flow patter within the wetland. This wetland is proposed for direct impact by alternative 1..		
.500(6)(b)Water Environment (n/a for uplands)	w/o pres or current: 7	with: 0
This wetland has appropriate hydrophytic vegetation and appears to support the appropriate hydroperiod. The wetland lacks community zonation because the fire regime is not adequate to maintain the subcanopy and shrub strata woody species as coppice. There is no evidence of siltation in this wetland from surrounding land uses. There are hydric soils present. This area is proposed for a direct impact by alternative1.		
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	w/o pres or current: 6	with: 0
The canopy within the non-disturbed portion of this polygon are appropriate; however, approximately 1/2 of the polygon area has been cleared and there is no canopy due to continual maintenance. This area is proposed for a direct impact bye either alternative 1.		

Score = sum of above scores/30 (if uplands, divide by 20)	
current or w/o pres: 0.63	with: 0

If preservation as mitigation,
Preservation adjustment factor =
Adjusted mitigation delta =

For impact assessment areas
FL = delta x acres = 0.16

Delta = [with-current]
0.63

If mitigation
Time lag (t-factor) =
Risk factor =

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
SR 87 Connector PD&E - Alternative 1 only		Polygon 14

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size
643	Seepage Slope / Wet Prairie	Secondary and Cumulative Impacts adjacent to shading impacts	60.07

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e.OFW, AP, other local/state/federal designation of importance)
Blackwater River	III	N/A

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

Wetlands within this secondary and cumulative impact polygon are adjacent to the proposed bridges on the Blackwater River, Clear Creek, and the reticulated Flatwoods salamander critical habitat area. All wetlands directly connect to either the Blackwater River or Clear Creek via surface water sheet flow.

Assessment area description

These wetlands are similar in habitat quality to impact polygons 1, 3, 4, 8, and 9. The wetlands areas contain Bottomland Hardwood and Wet Prairie habitats.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
Blackwater River, Coldwater Creek, RFS2 Critical Habitat, Munson Highway, Blackwater Heritage Trail	

Functions	Mitigation for previous permit/other historic use
Water filtration, sediment stabilization, wildlife habitat, river and creek buffer	N/A

Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found)	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)
Migratory birds, small-medium-large mammals, reptiles, amphibians	many threatened plant species (sundews, pitcher plants, lily, etc.), Flatwoods salamander, black bear.

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

None during field survey

Additional relevant factors:

Assessment conducted by:	Assessment date(s):
Daniel Van Nostrand	9/1/2012, update February 2013

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
SR 87 Connector PD&E		Polygon 14 - S/C Impacts (shading)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Secondary and Cumulative Impacts Shading	Daniel Van Nostrand	9/1/2012, update February 2013

Scoring Guidance
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed

Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)
Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface water functions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

.500(6)(a) Location and Landscape Support	w/o pres or current: 9	with: 8
This secondary and cumulative wetland polygon is adjacent to proposed shading impacts from the bridges over the Blackwater River, Clear Creek, and the RFS2 Critical Habitat unit. There is minor limitation to wildlife movement to and from this polygon due to the residential land. Due to the minimization of impacts by bridging there will be minor impacts to the location and landscape support.		
.500(6)(b)Water Environment (n/a for uplands)	w/o pres or current: 10	with: 10
Due to the minimization of impacts by bridging these wetlands and collecting stormwater, there will be no impacts to wetlands outside of the direct bridge footprint.		
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	w/o pres or current: 9	with: 8
There will be minor secondary and cumulative impacts to vegetation outside of the bridge footprint during the construction process; however, it is anticipated that the wetlands in these polygons will regenerate with native, wetland vegetation soon after the construction occurs.		

Score = sum of above scores/30 (if uplands, divide by 20)	
current or w/o pres: 0.93	with: 0.87

If preservation as mitigation,
Preservation adjustment factor =
Adjusted mitigation delta =

For impact assessment areas
FL = delta x acres = 4.00

Delta = [with-current]
0.07

If mitigation
Time lag (t-factor) =
Risk factor =

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
SR 87 Connector PD&E		Polygon 15

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size
643, 617, & 630	Seepage Slope / Wet Prairie, Basin Swamp, and Dome Swamp	Secondary & Cumulative adjacent to direct impacts	Alt. 1 = 79.33 & Alt. 2 = 73.94

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e.OFW, AP, other local/state/federal designation of importance)
Blackwater River	III	N/A

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

Wetlands within this secondary and cumulative impact polygon are adjacent to the proposed direct wetland impacts within the corridor areas. All wetlands directly connect to either the Blackwater River or Clear Creek via surface water sheet flow or through ditches.

Assessment area description

These wetlands are similar in habitat quality to impact polygons 2, 5, 6, 7, 10, 11, 12 and 13. The wetlands areas contain seepage slopes/wet prairies, basin swamps, and dome swamps.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
SR 87 North, Munson Highway, Blackwater River, Coldwater Creek, RFS2 Critical Habitat, Munson Highway, Blackwater Heritage Trail	

Functions	Mitigation for previous permit/other historic use
Water filtration, sediment stabilization, wildlife habitat, river and creek buffer	N/A

Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found)	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)
Migratory birds, small-medium-large mammals, reptiles, amphibians	many threatened plant species (sundews, pitcher plants, lily, etc.) and black bear.

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

None during field survey

Additional relevant factors:

Assessment conducted by:	Assessment date(s):
Daniel Van Nostrand	9/1/2012, update February 2013

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
SR 87 Connector PD&E		Polygon 15 - S/C Impacts
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Secondary and Cumulative Impacts Adjacent to Direct Impact Areas	Daniel Van Nostrand	9/1/2012, update February 2013

Scoring Guidance	Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface water functions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

.500(6)(a) Location and Landscape Support	w/o pres or current: 8	with: 6	This secondary and cumulative wetland polygon is adjacent to proposed direct impacts from the proposed corridor alternatives. The new roadway will limit wildlife movement within the general vicinity cause more likelihood of vehicular deaths to wildlife. Further, water flows may be altered due to required water collection and conveyance for roadway features changing inputs downstream.
.500(6)(b)Water Environment (n/a for uplands)	w/o pres or current: 8	with: 4	Due to the proposed project impacts, flow between wetlands on either side of the proposed corridor will be altered from its current state.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	w/o pres or current: 7	with: 6	There will be only minor impacts to the vegetative structure of the wetlands in the secondary and cumulative impact polygons during construction. Following construction it is anticipated that any disturbed vegetation will regenerate with native wetland vegetation; however, a new roadway introduces a vector for the dispersal of invasive plant species.

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres: 0.77	with: 0.53

If preservation as mitigation,
Preservation adjustment factor =
Adjusted mitigation delta =

For impact assessment areas
FL = delta x acres = **Alt. 1**: 18.51 & **Alt. 2**: 17.25

Delta = [with-current]
0.23

If mitigation
Time lag (t-factor) =
Risk factor =

For mitigation assessment areas
RFG = delta/(t-factor x risk) =